

**诱导公式**

**Continuous-time periodic square wave连续时间方波**

**Discrete-time periodic square wave离散时间方波**

When ,

When ,

化简技巧

**等比数列**

通项公式：

两项关系：

求和公式：

**Convolution卷积**

一个函数的换成，另一个函数的换成；如果结果以原点为界，记得写成的形式；的图像正常，的图像关于轴翻转后，原点为

**Singularity functions**

求导；积分；是unit doublet

**Even and odd decomposition**

奇分解围绕原点旋转除2，偶分解围绕y轴变换除2

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| --- | --- | --- |
| **系统性质的判据** | 输入输出关系 | 单位冲激响应 |
| Memoryless | Output at depends only on the value of input at | for |
| Invertible | There exist an inverse system |  |
| Causality | Output at this time only depends on values of the input at the present time and in the past | for |
| Stability | BIBO |  |
| Time-invariance | Let  Check | Must satisfy |
| Linearity | Let  Check | Must satisfy |

**Fourier Series傅里叶级数**

|  |  |
| --- | --- |
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**Impulse train**

**Properties of convolution卷积的性质**

**Euler’s formula欧拉公式**